KNAUF INSULATION

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Permits Office Air-3
U.S. EPA, Region 9

February 9, 2007

Director, Air Division (Attn: AIR-3)
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, California 94105

Re: Knauf Insulation, GmbH
NSR-4-4-4, SAC 03-01
Request for Administrative Amendment
to Install Regenerative Thermal Oxidizer

Dear Director:

Per our discussions with Ann Lyons and other members of EPA's staff on January 26, this letter requests an administrative amendment to the above-referenced permit in order to replace the two existing thermal oxidizers (TOs) which control emissions from the Line 641 curing oven with one regenerative thermal oxidizer (RTO). In support of this request, I have enclosed a copy of the application, including the cover letter, that we submitted to the Shasta County Air Quality Management District to obtain approval of this project.

Although the project is fully described in the enclosed application, a few salient points should be highlighted. First, the single RTO will be designed to achieve the same destruction efficiencies as the combined destruction efficiencies of the two TOs. Thus, no increase in emissions from the curing line will result from this replacement.

Second, the RTO will require significantly less energy than the two RTOs in order to operate. It is expected that only about 10-20% of the energy needed to operate the two TOs will be needed to operate the RTO. Thus, this replacement project will cause a significant reduction in emissions of natural gas combustion by-products, most notably CO_2.

Finally, due to the fact that this project will not increase emissions of any PSD-pollutant, we believe it does not trigger any PSD permit modification requirement. If any revision is needed at all, we would hope that this request could be processed administratively and become effective immediately.

Knauf Insulation GmbH, 400 East Walker Street, Shelbyville, IN 46176
Telephone (317) 421-3341, Fax (317) 398-5501, www.KnaufInsulation.com

Please contact me (or have your staff contact me) at your earliest convenience to discuss these issues further. Thank you.

Sincerely,

Stephen R. Aldridge
Manager, Environmental Health & Safety

Via Overnight Delivery
cc: Ann Lyons, Esquire *(Via Overnight Delivery)*
Bill Taylor, Director of Operations - Knauf, Shasta Lake
Robert T. Grand, Esquire
Anthony C. Sullivan, Esquire

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February 7, 2007

Mr. Ross Bell
Air Quality District Manager
Shasta County AQMD
1855 Placer St.
Redding, CA 96001

Re: Application to Install Regenerative Thermal Oxidizer on the 641 line at Knauf Insulation in The City of Shasta Lake. Permit #97-PO-28a.

Dear Mr. Bell:

Knauf Insulation submits this Authority to Construct (ATC) Permit Application for your review, to obtain approval to install and operate a Regenerative Thermal Oxidizer (RTO) on the 641 curing oven at our facility in the City of Shasta Lake. This RTO will replace the existing thermal oxidizers (2) currently controlling emissions from the above referenced source. The following documents are attached:

1. Completed Application for Authority to Construct/Permit to Operate Form
2. Completed Device Information Sheet
3. Minor amendment letter from the City of Shasta Lake, dated February 6, 2007
4. Site plan with RTO location.
5. Submitted as Confidential Business Information in a separate envelope marked as such:
    a. RTO vendor proposal.
    b. Process Flow Diagrams (PFDs) – existing process and proposed.
6. $75.00 application fee.

The RTO will provide the same level of emission control while using significantly less energy (natural gas), and therefore generate significantly less emissions of natural gas combustion by-products, specifically CO_2. The proposed RTO would replace the two, once-through, thermal oxidizers (TOs) that have been in operation since the February 2002 plant start-up. The existing thermal oxidizers utilize two 18 MMbtu/hr burners (rated maximum capacity), a total capacity of 36 MMBtu/hr, to maintain the required firebox temperature. The proposed RTO will use one 1.3 MMbtu/hr burner (rated maximum capacity) to maintain the required firebox temperature. The RTO will recover much of the energy used to keep the firebox at the proper temperature, thus lowering the overall energy use.

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There will be no increase in criteria or HAP emissions associated with this installation. The gas temperature in the Main Stack will be lower since the exhaust temperature from the RTO (approximately 550 F) is significantly lower than the exhaust temperature from the existing once-through TOs (1400 F). A lower Main Stack temperature may cause the formation of visible water vapor during colder weather due to the high moisture content (close to saturation) of the Main Stack exhaust stream. This situation may also result in the formation of visible water vapor in the stack itself, which may cause the Continuous Opacity Monitor (COM) data to be inaccurate at these times since the COM may improperly consider this water vapor to be opacity. Per EPA Method 9 water vapor is not considered "opacity".

The cooling section scrubber exhaust is currently combined with the outlet exhaust of the oven discharge incinerator and then exhausted to the Main Stack. As part of this project the cooling exhaust will be routed to the WESP inlet.

The existing once-through thermal oxidizers will be kept in place in the near term. In the case of a serious RTO malfunction, requiring an extended downtime, the original TOs could be brought back on line until the RTO malfunction is corrected, allowing production to continue. Therefore, we will maintain the option of operating the existing TOs.

In light of the just recently signed AB 32 - California Global Warming Solutions Act of 2006, it should be noted that the significant reduction in natural gas usage associated with the installation and operation of a RTO should result in a significant reduction in the generation of the green house gas CO_2.

Per the SCAQMD's List and Criteria directions the following information must be provided with the application forms:

A. List of Required Information.

1. Name and address of business and responsible person for the application.

   - See attached ATC/PTO application form.

2. Description of facility – a plot plan to include equipment locations and property boundaries.

   - See plot plan submitted with original permit application. The proposed RTO would be located outside between the existing Main Stack and the production building.

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3. Description of the surroundings

    - See plot plan submitted with original permit application. There are no public or private schools within 1000 feet of the facility property boundary.

4. Description of project

    - See previously submitted application(s). The proposed RTO will replace the existing thermal oxidizers only. The production process and raw materials will not be changed or modified. See attached completed Device Information Sheet and attached vendor proposal. The performance of the RTO will at least equal the performance of the existing thermal oxidizers.

5. Description of all project equipment operated with the use of organic fuels.

    - The RTO will burn only natural gas.

6. Descriptive information on all air pollution control equipment.

    - There will be no changes to the production process. The RTO will replace the existing thermal oxidizers. The performance of the RTO will at least equal the performance of the existing thermal oxidizers.

7. Ambient air quality data and modeling required to determine impacts of emissions.

    - This project will not cause an increase in emissions of any pollutant. The performance of the RTO will at least equal the performance of the existing thermal oxidizers. The impact of facility emissions will remain unchanged from the last review.

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8. Documentation of historical emissions from the facility.

   - Historical emissions data has been submitted to the SCAQMD in the form of annual compliance testing reports. This project will not cause an increase in emissions of any pollutant. The performance of the RTO will at least equal the performance of the existing thermal oxidizers.

If you have any questions please give me a call at 866-445-2363, ext 8408 or email me at steve.aldridge@knaufusa.com.

Sincerely,

Stephen R. Aldridge
Manager EH&S

cc: Bill Taylor, Director of Operations, Knauf Insulation - Shasta
Randall Peterson, EH&S Manager, Knauf Insulation – Shasta
Carla L Thompson, City of Shasta Lake

Attachments: SCAQMD Application for Authority to Construct/Permit to Operate
SCAQMD Device Information Sheet
Minor amendment letter from the City of Shasta Lake, dated February 6, 2007
Submitted as Confidential Business Information in a separate envelope marked as such:
- McGill AirClean LLC - RTO Proposal #Q-4491-4 dated July 25, 2006 (submitted as Confidential Business Information in a separate envelope marked as such).
- Process Flow Diagrams – existing and proposed processes.

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SHASTA COUNTY DEPARTMENT OF RESOURCE MANAGEMENT
AIR QUALITY MANAGEMENT DISTRICT

1855 PLACER STREET, SUITE 101, REDDING, CA 96001
VOICE (530)225-5674/FAX (530)225-5237

DEVICE INFORMATION SHEET

(List all data applicable to each device.)

Business Name: Knauf Insulation

Device: Curing Oven exhaust Regenerative Thermal Oxidizer (RTO)

1. Operating Schedule: 24 hrs/day 7 days/wk 52 wks/year

2. Materials Processed and Units:

Type of Material	Average Units*	Maximum Units*
Fiberglass	≃ 16,000 scfm	≃ 20,000 scfm
insulation curing	≃ 37,000 acfm	≃ 40,000 acfm
oven exhaust		

3. Fuel Consumption:

Fuel Type	% Sulfur Content	Average Btu/Hour	Maximum Btu/Hour
Nat. Gas	NA	1.1 mm	1.3 mm

4. Exhaust Air:

Average Flow in Ft^3/Min	Maximum Flow in Ft^3/Min	Temperature in °F	% Water by Volume
16,000 scfm	20,000 scfm	525°	10.0

5. Exhaust Stack Data:

Height Above Ground in Feet	Stack Diameter in Feet
200	17' Ø @ outlet

6. Pollutant Estimates:

Sulfur Oxides ppm	Nitrogen Oxides ppm	Carbon Monoxide ppm	Hydrocarbons ppm	Particulate Matter grains/dscf	Other
NA	RTO exhaust will be combined with WESP exhaust.				

*Use appropriate units, e.g., gal/yr, tons/yr, lbs/day, lbs/hr, yds/shift

Filer's Printed Name: Stephen R. Aldridge Signature: [signature] Date: 2/8/07

NOTICE: After the Authority to Construct is granted, any deviation from approved plans is not permitted without first securing additional approval from the Air Pollution Control Officer. As stated in the Health and Safety Code Sections 41510, 41511, and 42304, the Air Quality Management District shall make random audits on submitted data to insure the appropriateness of such data. The willful submission of false or inaccurate data constitutes a misdemeanor per Health and Safety Code Section 42400.

SHASTA COUNTY DEPARTMENT OF RESOURCE MANAGEMENT
AIR QUALITY MANAGEMENT DISTRICT

1855 PLACER STREET, SUITE 101, REDDING, CALIFORNIA 96001 VOICE (530)225-5674/FAX (530)225-5237

APPLICATION FOR AUTHORITY TO CONSTRUCT/PERMIT TO OPERATE

INSTRUCTIONS PERMIT NUMBER # 97 -PO- 282

Each applicant for an Authority to Construct shall provide to the District the following:

A. One application form for each emission unit or multi-component system at the facility.
B. A $75 one time filing fee for each application or a $15 transfer of ownership * or name change fee made payable to the Shasta County AQMD. (*Furnish a copy of the sales agreement or a signed statement from the seller.)
C. Adequate drawings of each emissions unit, including plot plan and area map indicating receptors within 1/4 mile of the facility. Any public or private school with an outer boundary within 1000 feet of the emissions unit must be included on the map.
D. A signature of a responsible member of the organization on each application.
E. An annual permit fee must be paid before a Permit to Operate is granted. The District shall notify the applicant of the appropriate amount due following an initial inspection of the permitted device(s).

1. Business Name: Knauf Insulation
2. Email: steve.aldridge@knaufinsulation.com
3. Assessor's Parcel Number: 064-150-72 Telephone: 866-445-2363 Ext. 8408 Fax: 317-398-5501
4. Type of Business: Manufacturing - fiberglass insulation
5. Mailing Address: 3100 Ashby Rd., Shasta Lake, CA 96019
6. Address of Equipment: Same
7. Equipment Description (use additional sheets if required): Installation of a Regenerative Thermal Oxidizer to replace existing once-through thermal oxidizers.

8. Application to: (check one)		9. Type of Organization:	
Operate Existing Equipment	__	Corporation	X
New Construction	__	Partnership	__
Change of Location	__	Individual Owner	__
Modification	X	Government Agency	__
Exempt Equipment	__		
Change of Ownership*	__		

(Copy of agreement or statement attached? Yes ____ No ____)

10. Planned construction dates; Start: 8/1/07 End: 11/30/07
11. Is a plot plan attached? Yes: X No: ____
12. Is this emission unit within 1000 feet from the outer boundary of any public or private school? Yes: ____ No: X
13. Name of Owner(s)/Principles: Knauf Insulation
14. Signature of Applicant: _____ Date: 2/8/07
15. Type/Print Signer's Name: Jon Pereira Title: V.P. of Operations

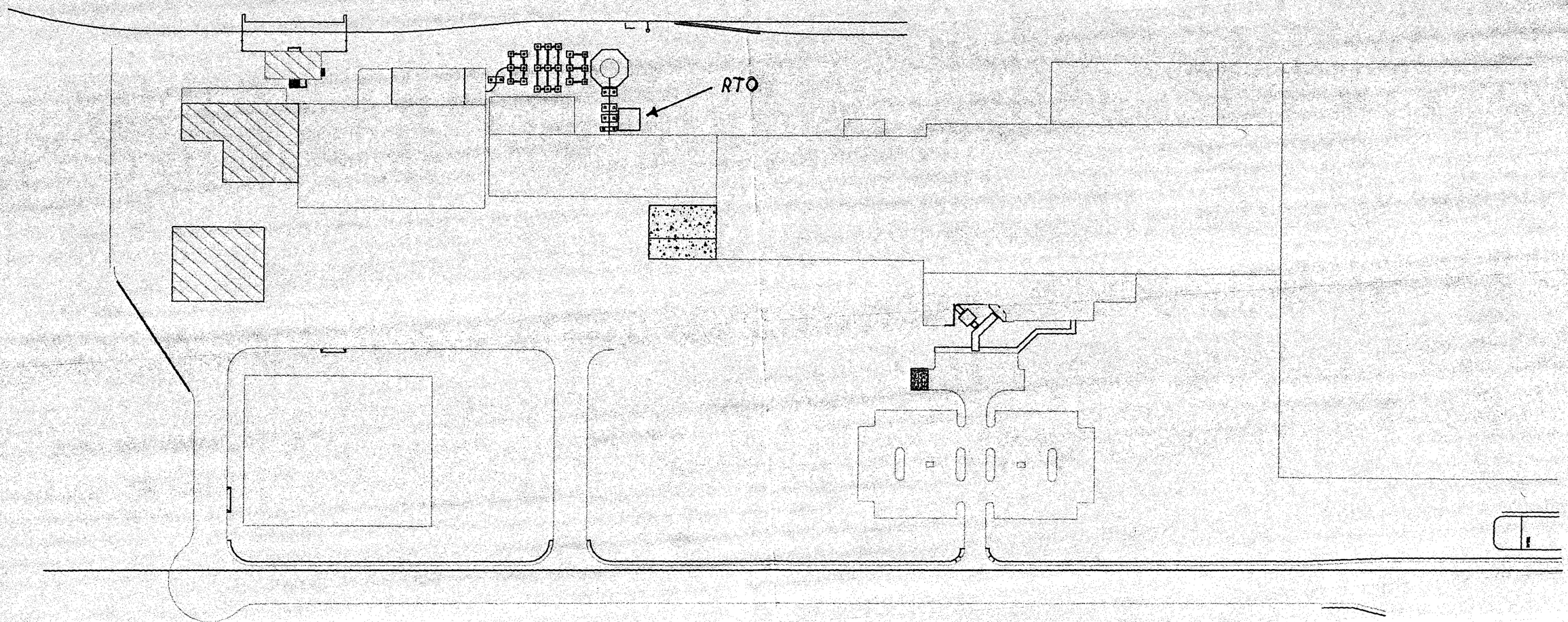
BY SIGNING THIS APPLICATION, THE APPLICANT/PROPERTY OWNER AGREES TO DEFEND, INDEMNIFY, AND HOLD THE SHASTA COUNTY AIR QUALITY MANAGEMENT DISTRICT HARMLESS FROM ANY CLAIM, ACTION, OR PROCEEDING BROUGHT TO ATTACK, SET ASIDE, VOID OR ANNUL THE DISTRICT'S APPROVAL OF THIS APPLICATION, ISSUANCE OF ANY ASSOCIATED PERMIT, AND ANY ENVIRONMENTAL REVIEW ASSOCIATED WITH THE PROPOSED PROJECT.

Other Division Review

General Plan/Zoning:		
Use requires use permit: Yes No		
Use requires building permit: Yes No		
Planning: Date:	Building: Date:	

Air Quality Fees Collected

Type	Date	Amount	Receipt #	Rec'd By
Filing				
Permit				


RTO